

AMENDMENTS TO THE CLAIMS

Claim 1 (Original): An optical alignment apparatus using visible light source and images, comprising:

a first light source for providing light of a visible wavelength range to perform optical alignment;

a second light source providing light of an infrared wavelength range;

a micrometer stage for aligning the light outputted from the first light source or the second light source with an active area of a detector;

a lensed fiber connected to the micrometer stage, for inputting light into the active area of the detector;

an optical alignment confirming means for visually confirming whether the light outputted from the lensed fiber is aligned with the active area of the detector;

an image information acquiring means connected to the optical alignment confirming means, for acquiring image information; and

a control means for operating the micrometer stage based on the image information acquired by the image information acquiring means to perform optical alignment.

Claim 2 (Original): The optical alignment apparatus as recited in claim 1, further comprising:

an optical coupler for connecting the first light source and the second light source simultaneously and outputting input light to the first output port and the second output port of the optical coupler in a predetermined proportion;

a compensation means for compensating a difference in distances to a beam waist, the difference being generated by different wavelengths of the first light source and the second light source; and

an optical intensity supervising means for controlling optical intensity of light inputted to the active area of the detector by being connected with the optical coupler's output port which is not connected with the detector.

Claim 3 (Currently Amended): The optical alignment apparatus as recited in claim 42, wherein the optical coupler includes a first input port, a second input port, a first output port and a second output port.

Claim 4 (Original): The optical alignment apparatus as recited in claim 1, wherein the detector performs optical alignment with the light outputted from the first light source or the second light source.

Claim 5 (Original): An optical alignment method using a visible light source and images, comprising the steps of:

- a) aligning light outputted from a visible light source with an active area of a detector;
- b) inputting the light outputted from the visible light source into the active area of the detector through an optical coupler and lensed fiber;
- c) visually confirming on what part of the active area of the detector the light transmitted through the lensed fiber is focused by using a microscope, and providing image information, which shows an extent of optical alignment and is provided by a charge coupled device connected to the microscope, to a control circuit unit;
- d) controlling the micrometer stage to perform optical alignment by using the image information provided by the charge coupled device in the control circuit unit; and
- e) performing optical alignment between the lensed fiber and the active area of the detector by operating the micrometer stage under the control of the control circuit unit.

Claim 6 (New): The optical alignment apparatus as recited in claim 1, wherein the micrometer stage aligns the light sources with an active area of a detector in directions of x, y, z and tilt.